AMENDMENTS TO THE DRAWINGS

The attached drawing is newly added Fig. 2A. Fig. 2A has been added to conform more clearly with the Specification.

Attachment: Figure 2A

REMARKS

Claims 1, 2, 4-7 and 9-37 are pending in the application.

Claims 1-2, 4-7 and 9-37 have been rejected.

Claim 37 has been cancelled.

Claims 14, 27, 30, 33, and 36 have been amended.

Claims 38, 39, and 40 have been added. No new matter has been added. Support for claim 38 can be found at least in Applicant's Specification ¶0065. Support for claim 39 is found at least in Applicant's Specification ¶ 0064. Support for claim 40 can be found at least in Applicant's Specification ¶ 0087.

Formal Matters

The Office Action states that "said first and said second caches at least partially comprise one another" is not shown in the drawings. Applicants have included Fig.2A, and amended the specification to show the features recited in claim 2. Fig. 2A is fully supported at least by Applicants' original claim 2.

Rejection of Claims under 35 U.S.C. § 112

Claim 37 stands rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. Claim 37 has been cancelled. Accordingly, Applicants respectfully submit that this rejection is moot.

Rejection of Claims under 35 U.S.C. § 102(b)

Claims 1, 4-7 and 9-36 stand rejected under 35 U.S.C. § 102(b) as purportedly being anticipated by U.S. Patent 5,485,598 issued to Kashima et al. ("Kashima"). Applicants respectfully traverse this rejection. However, in order to expedite prosecution and further distinguish Applicants' claims from the cited reference, Applicants have amended claims 14, 27, 30, 33, and 36. The amended claims contain substantially the following limitations:

A method comprising:

maintaining a first cache, wherein

>> said maintaining is performed by one of an upper-level system and a lower-level storage module, and

>> said first cache is configured to provide read access and write access by said one of said upper-level system and said lower-level storage module;

cloning information stored in a first unit of storage into a second unit of storage, wherein

>> said first cache comprises said first unit of storage and a second cache comprises said second unit of storage; and

accessing said second cache, wherein

>> said accessing is performed by the other of said upper-level system and said lower-level storage module,

>> said second cache is configured to provide read access and write access by said other of said upper-level system and said lower-level storage module, and

>> said accessing is performed using at least one of a set of interfaces, wherein said set of interfaces is exported from said one of said upper-level system and said lower-level storage module to said other of said upper-level system and said lower-level storage module.

See, e.g., claim 36 (amended). Applicants respectfully submit that the cited reference fails to teach or suggest all of the claimed features. For example, Applicants respectfully submit that the cited reference fails to teach or suggest "said accessing is performed using at least one of a set of interfaces, wherein said set of interfaces is exported from said one of said upper-level system and said lower-level storage module to said other of said upper-level system and said lower-level storage module."

The Office Action refers to Kashima Fig.8 as purportedly disclosing the second cache (old data cache 10, "ODC") being maintained by computer 10 (which the Office Action equates to the claimed upper-level system). Office Action, pp.4-5. The Office Action then refers to S9 and S12 of Fig.7 as purportedly showing the ODC being accessed by the disk array 1 (which the Office Action equates to the claimed lower level system). Office Action, pp.4-5. Applicants point out that Fig.7 describes Fig.4, not Fig.8 as suggested in the Office Action. The system shown in Fig.4 differs from that in Fig.8 in that Fig.4 shows the ODC maintained by the disk array, not by the computer. Fig.8 shows

the ODC maintained by the computer. Fig.10, which describes Fig.8, does not show the disk array having access to the ODC maintained by the computer.

Therefore, Applicants respectfully maintain that the cited reference fails to disclose accessing said second cache by the other of said upper-level system and said lower-level storage module. Furthermore, there is absolutely no suggestion in the cited passages of Kashima that said accessing involves exporting and using a set of interfaces.

For at least the foregoing reasons, the cited art fails to teach or suggest claim 36 and its dependent claims 1, 4-7, and 9-13. Claims 14-36 are patentable over the cited art for similar reasons.

Rejection of Claims under 35 U.S.C. § 103(a)

Claims 2 and 37 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Kashima. Applicants respectfully traverse this rejection. Applicants respectfully submit the rejection of claim 37 is moot since claim 37 is herein cancelled. Applicants also assert that since Kashima fails to include every limitation of independent claim 36, as discussed above, claim 2, which depends therefrom, is not obvious in light of Kashima.

Additionally, Applicants respectfully maintain that Applicants never admitted to the claimed first cache and the claimed second cache being portions of the same cache as being common knowledge or well-known (a point which Applicants in fact did not nor do not concede). Instead, Applicants stated that even if such were the case (again, which Applicants did not nor do not concede), (1) Official Notice cannot be taken of the claimed single cache that includes both a first cache and a second cache because such a cache structure in the claimed architecture is not obvious (even in light of Kashima and/or any Official Notice so taken), and (2) that given the foregoing, Official Notice is not proper in such case, and Applicants therefore respectfully request the appropriate citation of a reference in this regard. Applicants therefore respectfully request that the Examiner provide an affidavit or other appropriate recognition as to the personal knowledge relied on within the meaning of MPEP §2144.03 and 37 C.F.R. §1.107, or

designate a reference or particular parts of the cited references and the pertinence of each reference in support of the rejection as required by 37 C.F.R. 1.106(b), which provides: "When a reference is complex or shows or describes inventions other than that claimed by the applicant, the particular part relied on must be designated as nearly as practicable. The pertinence of each reference, if not apparent, must be clearly explained and each rejected claim specified."

> In this regard, reliance on "well known" prior art, MPEP § 2144.03 states:

> If justified, the examiner should not be obliged to spend time to produce documentary proof. If the knowledge is of such notorious character that official notice can be taken, it is sufficient so to state. *In re Malcolm*, 129 F.2d 529, 54 USPQ 235 (CCPA 1942). If the applicant traverses such an assertion the examiner should cite a reference in support of his or her position.

The applicants respectfully submit that the information the Examiner asserts to be obvious has therefore not been shown to be, nor recognized as, obvious. Thus, in traversing the Examiner's assertion, the applicants respectfully request that should it be the Examiner's position that the rejection is based on personal knowledge, the Applicants kindly request that the facts supporting such a position be supported by an affidavit from the Examiner. Accordingly, Applicants respectfully request Examiner withdraw this rejection.

Applicants have added new claims 38, 39, and 40. Applicants respectfully submit that these claims are allowable over the cited reference for at least the reason that they depend from claim 36, which Applicants have argued herein is allowable. Furthermore, Applicants submit that the cited references do not teach the claimed "freeing said second unit of storage," "said upper-level system manages cloned information in said second cache via an application programming interface (API)," or "copying said second unit of storage to a copy-on-write snapshot."

CONCLUSION

In view of the amendments and remarks set forth herein, the application and the claims therein are believed to be in condition for allowance without any further examination and a notice to that effect is solicited. Nonetheless, should any issues remain that might be subject to resolution through a telephonic interview, the Examiner is invited to telephone the undersigned at 512-439-5092.

If any extensions of time under 37 C.F.R. § 1.136(a) are required in order for this submission to be considered timely, Applicant hereby petitions for such extensions. Applicant also hereby authorizes that any fees due for such extensions or any other fee associated with this submission, as specified in 37 C.F.R. § 1.16 or § 1.17, be charged to deposit account 502306.

Respectfully submitted,

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